

REMARKS

Status of the Claims

Claims 30-58 are pending. Claims 1-29 are canceled. No new matter is added in the above amendment.

Issues Related to Oath/Declaration Objection

The outstanding Office Action indicated that the Declaration is defective. Specifically, the Office Action states that the statement acknowledging the duty of disclosure uses the language “material information” instead of “material to patentability.”

A copy of page 1 of the original executed Declaration is enclosed with the “material to patentability” language marked for the Examiner’s review. Accordingly, it is believed that a new Declaration is not necessary to comply with 37 C.F.R. § 1.67(a).

Issues Under 35 U.S.C. § 112, Second Paragraph

Claims 1-29 are rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested.

Of course, this rejection is moot in view of the above amendment, which canceled claims 1-19. However, the issues raised in the Office Action do not apply to the new claims.

In new claim 30, which corresponds to canceled claim 1, “the axis of the shaft” is further defined, and the phrase “axes...being in the same place” (“plane” is the term clearly intended from the specification) has been deleted.

Claim 32, which corresponds to canceled claim 3, is amended to address the “second elbow portion” language issues raised by the Examiner.

Claim 49, which corresponds to canceled claim 20, is amended by replacing the word “place” with the word “plane.”

Accordingly, the newly added claims are not affected by the previous §112, second paragraph rejection.

Issues Under 35 U.S.C. § 112, First Paragraph

Claims 1-29 stand rejected under 35 U.S.C. § 112, first paragraph as allegedly not being enabled. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested.

The Office Action states that in claim 1, the phrase “a hollow shaft mounted for rotational movement within the housing” allegedly indicates that the shaft is the shaft is rotating. This rejection is moot in view of the amendment, which cancels claim 1. However, these issues do not apply to the newly added claims. Claim 30, which corresponds to claim 1, specifies that the “housing [is] mounted for rotation about a hollow shaft.”

Additionally, Claim 30 has been amended to further specify that the distal end of the shaft is sealed and the inlet is positioned further away from the distal end of the shaft than the outlet, which is supported by page 7 paragraph 1 of the specification. The claim further specifies that “and the inlet is positioned further away from the distal end 8D of the shaft than the outlet;”

which is supported by page 5 paragraph 5 and from the figures. Continuing with the claim, "and the first length (27) of the elbow portion extends through the longitudinally extending wall of the shaft (8) and is fixed thereto to provide a substantially liquid-tight seal" is supported by page 7 paragraph 5. No new matter is presented in the above amendment.

Issues Under 35 U.S.C. § 102

Claims 1-4, 13-15, 17-20, and 22 are rejected as allegedly being anticipated by Pawlak et al. Additionally, Claims 1, 7, 9, 10, 12-13, and 15-16 are rejected as allegedly being anticipated by Jarrett. These rejections are respectfully traversed. Reconsideration and withdrawal thereof are respectfully requested.

An embodiment of the present invention relates to increasing the coolant flow capacity within the roll. Low flow capacity causes inefficient cooling of the roll and additionally increases wear, therefore, the object of the present invention is to increase coolant flow within the roll whilst providing a secure reliable arrangement that is able to withstand the increased flow rate. The increased flow capacity is provided through the elbow portion and the positioning thereof.

The applied prior art provides for an arrangement whereby an elbow portion is positioned further away from the roll than the outlet is to the roll when fixed to the roll. This is the generally accepted flow path for coolant in an arrangement for cooling a roll and is clearly apparent from Figure 2 of Document Pawlak et al, as such the present invention as defined in claim 1 is novel in view of the citations.

Thus, a problem solved by the present invention the increase of coolant flow in the roll. The present inventors discovered that locating the elbow portion closer to the roll than the outlet

when fixed to the roll can enable significantly increased flow rates of coolant into the roll. The prior art, and in particular Pawlak et al, clearly teaches away from the invention. A first significant advantage of the present invention as defined in claim 30 is that the coolant flowing into the roll comes into contact at a very early stage with heat generated about the bearings (11). In cooling a roll, the bearings (11) get very hot and have a limited life expectancy due to the extreme conditions in which they are located. Therefore, increasing the life of such bearings by increasing the cooling is a significant advantage, providing less frequent maintenance periods thereby improving productivity. The flow path in Pawlak et al., for example, results in the coolant having been further heated by the time the coolant cools the bearings due to having exchanged heat with a greater volume of coolant exiting the roll. A further feature of the elbow portion extending through the longitudinally extending wall of the shaft is essential in such an arrangement in order to cause the coolant to be flowing into the cooling medium line (24). Again this provides a further benefit of the present arrangement as the elbow portion is fixed to the wall of the shaft (8) thereby providing a strong join which is sufficient to withstand the increased coolant flow rate into the roll. The present invention provides an arrangement whereby the coolant flow rate is significantly improved and additionally provides a compact arrangement which has increased strength and reliability.

In order to anticipate a claim, each and every element as set forth in the claim must be described in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, the identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q.2d

1913, 1920 (Fed. Cir. 1989). Applicants respectfully submit that in view of the deficiencies discussed above, it is clear that the references cited above do not anticipate the present invention.

In view of the above, Applicants respectfully request that this rejection be withdrawn.

Issues Under 35 U.S.C. § 103

Several claims are rejected under 35 U.S.C. § 103 as allegedly being obvious over either Pawlak '452 as a primary reference or over Jarett as a primary reference. These rejections are respectfully traversed. Reconsideration and withdrawal are requested. However, in view of above, these rejections are moot. The claims rejected herein are all dependent from, and incorporate all the features of, claims that are allowable.

As such, applicants respectfully submit that the 35 U.S.C. § 103 rejections should be withdrawn.

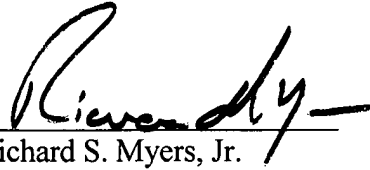
Petition for an Extension of Time

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicants hereby petition for a three-month extension of time for filing a response to the outstanding Office Action. The extension fee in the amount of \$525.00 is filed herewith.

From the foregoing, further and favorable reconsideration in the form of a Notice of Allowability is requested, and such action is believed to be in order.

If there are any questions concerning this amendment, or the application in general, the Examiner is respectfully urged to telephone the undersigned at the number listed below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Richard S. Myers, Jr.", with a horizontal line underneath.

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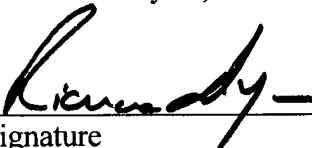
CERTIFICATE OF FIRST CLASS MAILING

I hereby certify that this Small Entity Transmittal Form, an Amendment under 37 C.F.R. § 1.111, and Return Receipt Postcard) are being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
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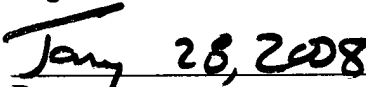
on January 28, 2008 (Monday).

Richard S. Myers, Jr.



Signature

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Date